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Introduction

Mr. Chairman, members of the Committee, thank you for inviting me to speak to you today about one of the most exciting and potentially rewarding economic and technological developments of our time. The Internet is quickly becoming the most widespread and accessible information technology medium in the world. It is clear that electronic commerce **--** the conduct of business over the Internet and through the use of other electronic means -- will be a major factor in our economic growth well into the next century. The Internet has the potential to become the country's most active trade and commerce vehicle, creating scores of high-paying jobs and revolutionizing the way companies do business with each other and with their customers. Increasingly, businesses in virtually every sector of the economy are turning to the Internet to cut costs and plan production. President Clinton has compared the potential impact of electronic commerce to the advances brought about by the steam engine, electricity and the industrial revolution, stating, "Today, we are on the verge of another revolution. Inventions like the integrated circuit, the computer, fiber optic cable, and the Internet are changing the way we work, learn and communicate with each other."

A Commerce Department study, ***The Emerging Digital Economy,*** released in April shows that the digital economy is growing and that businesses and workers are **significantly** benefitting

from it. According to the report, information technology (IT) industries are now estimated to make up more than 8 percent of the economy, and have accounted for about 25 percent of the real economic growth in the U.S. GDP during the last five years. The recent expansion of the Internet has been a significant factor affecting the growth of these industries. More than 7 million people work in IT jobs and earn wages that are two-thirds higher than the average for all private sector jobs. Business spending for IT capital equipment has been expanding over the last two decades, while spending for other types of capital has been declining. Sometime in the first decade of the next century, over one billion people will be connected to the Internet worldwide. This growth in Internet usage will accelerate the importance of IT industries to the world economy and will create opportunities for the growth of commerce using the Internet.

Businesses of all sizes are using the Internet to create, buy, sell and distribute products and services. Many are already realizing substantial productivity improvements as a result, and have been growing their Internet business activities at dramatic rates. Business-to-business electronic commerce alone is expected to exceed $300 billion by the year 2002.

Virtually all sectors of the economy are going "online." Analysts project that by the year 2000, nearly 7 percent of all U.S. airline revenues for passenger travel will be generated by online sales. As many as 16 million households may do their banking via the Internet, and over $1 billion of insurance premiums will be generated online. Consumers are increasingly using the Internet to buy books, music, clothing, electronics, and other household items. Large ticket items, such as automobiles, are being marketed and sold via the Internet -- at least 1 out of 5 people will use it to buy a new car or truck by the turn of the century.

Recognizing the enormous potential of electronic commerce, President Clinton last July outlined a strategy for private sector and government action that will foster increased business through the Internet while preserving it as a medium that defines the market through competition and consumer choice. The guiding principle in the President's *"Framework for Global Electronic Commerce"* is that the private sector must take the lead in facilitating the further development of electronic commerce. The government's role is to establish an environment wherein electronic commerce can flourish, competition is fair, and intellectual property as well as privacy are protected. A progress report on the *Framework* principles will be delivered to the President shortly.

Bilateral, Regional and Multilateral Fora

The United States was one of the first countries to develop a comprehensive policy on electronic commerce, focusing worldwide attention on this new method of transacting business. Since the *Framework was* issued, more than a dozen other countries have issued electronic commerce strategies and set up working groups to help establish their governments' policies. Multilateral and regional organizations, including the World Trade Organization (WTO), the Organization for Economic Cooperation and Development (OECD), the United Nations, the Asia-Pacific Economic Cooperation (APEC) forum, the Free Trade Area of the Americas (FTAA) and the Trans-Atlantic Economic Partnership (TEP), are making electronic commerce a central area of focus. In all these fora, we at the Commerce Department have sought to advance the principles set out in the President's *Framework,* and to build a global understanding of the

benefits of electronic commerce. In all our international work, we have been working closely with the private sector, as critical partners in this effort. I would like to highlight some of the developments in these fora.

At the May 1998 WTO Ministerial Conference attended by President Clinton, the WTO called for the establishment of a work program on the trade-related aspects of electronic commerce. The details of this work program must be ironed out by September 1998. Significantly, we have succeeded in convincing our fellow members in the WTO to agree to a "standstill" on the imposition of customs duties on electronic transmissions, thus preserving the Internet as a tariff-free environment for commerce. All 132 WTO member countries made this commitment, representing an important achievement.

At the OECD, the Trade Committee will conduct analyses to help build consensus on the role of electronic commerce in strengthening the multilateral trading system, and will also address other important issues that might not be taken up by the WTO. Possible issues might include an examination of the impact of electronic modes of supply on the WTO General Agreement on Trade in Services (GATS) treaty; improving OECD trade statistics; and Committee-sponsored workshops for developing countries to help them reap the benefits of electronic commerce. In the Information, Computer and Communication Policy Committee, work is underway to assess the economic impact of electronic commerce. We are also working to assure that effective policies on privacy and authentication emerge.

We are working in other multilateral fora, as well. We presented a proposal for an International Convention on Electronic Transactions before the United Nations Commission on International Trade Law (UNCITRAL). The Convention, discussed in more detail below, seeks

to eliminate paper-based barriers to electronic transactions and to address important issues relating to electronic authentication.

Regional initiatives include efforts by the APEC forum and the FTAA to examine ways to develop electronic commerce goals within their membership. In APEC, an Ad Hoc Task Force on Electronic Commerce is undertaking substantive work and coordinating with other APEC working groups in a number of important policy areas, including identifying impediments to electronic commerce in the region and facilitating the use of electronic commerce in APEC. The International Trade Administration (ITA), along with other U.S. Government agencies, has been participating in the electronic commerce work of the Task Force. We have actively promoted an APEC electronic commerce work program that goes beyond merely issuing recommendations, but also produces concrete deliverables. For example, the Task Force's proposed work program will examine ways to improve access to information infrastructure and increase confidence and trust in electronic commerce. It will also encourage government/private sector partnerships for training programs. In addition, the proposed work program encourages APEC member economies to allow the private sector to take the lead in developing self-regulatory mechanisms and to ensure that no regulation (where such regulation is deemed necessary) impedes electronic commerce. ITA will continue to work with the Task Force and other APEC groups and the private sector to ensure that APEC's electronic commerce work program is a robust one.

In the FTAA, a joint government-private sector Committee of Experts on Electronic Commerce has been established. The Committee will recommend to the trade ministers how to "increase and broaden the benefits to be derived from the electronic marketplace" in the Western Hemisphere and how electronic commerce should relate to the negotiations.

The Administration is also seeking support for the *Framework* principles in a number of bilateral discussions. For example, in December 1997, the United States and the European Union (EU) issued a "Joint Statement on E-Commerce." Since then the United States has issued a series of joint statements with France, Japan and the Netherlands, and we have additional discussions underway with Australia and Brazil.

Just this month, as part of the President's China summit, the United States and China also issued a joint statement pledging to conduct a series of exchanges, seminars and discussions on electronic commerce and the applications of the Internet. This initiative, which will be led by the Commerce Department, will involve working in cooperation with companies, enterprises and industry groups in both the United States and China to address a variety of activities that can benefit from the use of the Internet, including weather forecasting, distance learning, telemedicine, and commerce.

The President's *Framework* for fostering electronic commerce set out a number of electronic commerce policy initiatives designed to realize the full potential of the Internet as a commercial arena. Let me now address in detail some of these initiatives.

Taxation/Tariffs/Non-Tariff Barriers

The global, borderless nature of the Internet makes taxation and tariffs a difficult situation from both a policy and technical perspective. In addition to the WTO tariff standstill on electronic transmissions, the OECD has developed guiding principles for the taxation of electronic commerce, which will be presented at the OECD Ministerial conference in Ottawa in October. We support these initiatives which make clear that any taxation of Internet-based transactions should be neutral, fair, and simple.

In addition to working to ensure that the development of electronic commerce is not impeded by taxes, the Administration is striving to eliminate tariff and non-tariff barriers to trade in information technology products. Under the Information Technology Agreement, which entered into force on July 1, 1997, 43 countries -- representing nearly 95 percent of world trade in IT products -- will reduce tariffs on IT products to zero by the year 2000. This agreement covers the core of IT products that represent the Internet's hardware infrastructure, ranging from semiconductors and printed circuit boards to computers, telecommunications apparatus and computer networking equipment.

Since January 1998, the U.S. Government has been leading negotiations at the WTO on a second Information Technology Agreement ("ITA II") to extend coverage more fully in important areas such as computer-based scientific and analytical equipment and global positioning systems. ITA II would also cover various types of inputs and manufacturing equipment for information technology products, such as those designed for the production of printed circuit boards. We hope to successfully conclude these negotiations by late 1999.

The Administration firmly believes that the full promise of the Global Information Infrastructure cannot be realized without continued technological innovation and investment by the private sector. As the principal source of expertise and capital, the private sector should play the leading role in responding to market demands, expanding underlying networks, developing and adopting appropriate standards, and implementing new services and applications. Governments can facilitate such leadership by adopting a minimalist legal and regulatory approach that supports efficient investment and innovation, and promotes full and fair competition.

With the successful conclusion of the WTO Basic Telecommunications Agreement, there are now unprecedented levels of competitive market opportunities in the provision of basic telecommunications services and facilities among major trading partners. Given that telecommunications facilities and services provide the key infrastructure for the expansion of electronic commerce, the Administration is concentrating on ensuring that WTO commitments are implemented so that online service providers can reach end-users on reasonable and nondiscriminatory terms and conditions.

The Department is also seeking to ensure that new rules of competition in the global communications marketplace are technology-neutral and will not hinder the further expansion of electronic commerce. In particular, rules for licensing new services and technologies must be sufficiently flexible to accommodate the changing needs of consumers while allowing governments to protect important public interest objectives like universal service.

The Department also recognizes that telecommunications infrastructure development is quite uneven around the world, ranging from advanced, digitalized networks and applications to very limited and often inefficient basic telephone services. The Department firmly believes that the introduction of private investment, competition, and flexible regulatory regimes can spur the necessary build-out and improvements in network infrastructures around the world. In addition, the Department recognizes that developing countries represent significant market opportunities for U.S. industry. We are working directly with individual countries and through regional and international organizations, such as APEC, the Inter-American Telecommunication Commission (CITEL), and the International Telecommunication Union (ITU), to promote the development of regulatory environments that will foster further infrastructure improvements.

Authentication

Another area in which the **U. S.** Government, led by the Department of Commerce, is encouraging minimalist, predictable rules based on market developments and private sector leadership is "electronic authentication" -- an important issue which, **if approached** properly, will enable electronic transactions on a global basis. Electronic authentication involves issues such as how parties can know with certainty the identity of the sender of an electronic message, and how to verify that an electronic message has not been altered during its transmission. The private sector is already developing and implementing technologies and methods to address these issues, including digital signatures, signature dynamics, biometrics and other forms of electronic signatures.

Some governments have adopted, or are considering adopting, detailed rules governing the implementation and use of particular authentication technologies and methods. We have concluded that it is too early to enact such rules. Authentication technologies and methods, and their implementation models, are developing and changing rapidly. The market is witnessing a wide array of business practices in this area. Enactment of detailed rules at this point would essentially create business practices by legislative fiat, and could soon prove outdated, uneconomical or impractical.

More importantly, if not **carefully** drafted, these rules could disrupt private contractual arrangements. They could also confer legal benefits on certain technologies or implementation models which would effectively discourage the development and use of alternative or innovative authentication technologies, methods, and implementation models.

Working closely with the U. S. private sector, as well as other interested parties such as our States, we believe that two basic legal issues need to be addressed at this stage to facilitate electronic transactions: (1) paper-based barriers to electronic transactions; and (2) electronic authentication issues. Paper-based barriers to electronic transactions include laws that require paper contracts, handwritten signatures, or the retention of paper records. It is widely agreed, both domestically and internationally, that these barriers should be eliminated or modified to the maximum extent possible to allow the free flow of electronic transactions.

As I mentioned above, we have asked the United Nations Commission on International Trade Law (UNCITRAL) to consider on a priority basis an International Convention on Electronic Transactions (the Convention). The Convention would eliminate paper-based legal barriers to electronic transactions and provide an effective approach to authentication issues, despite any differences in national laws. The Convention would accomplish the latter goal by including provisions that: (a) reaffirm the rights of parties to a transaction to determine the appropriate technological means of authenticating their agreements; (b) provide that parties to a transaction should have the opportunity to prove in court that the authentication technique used in the transaction is valid; and (c) state that governments should treat providers and users of authentication services from other countries in a non-discriminatory manner.

The provisions concerning the removal of paper-based barriers to electronic transactions were derived from the 1996 UNCITRAL Model Law on Electronic Commerce, and are already broadly accepted, though not necessarily broadly adopted. A binding international convention would ensure their uniform adoption. Likewise, the provisions on authentication are based on principles (such as party autonomy) that all governments are likely to support, and which have

long been the basis for international commercial transactions. These provisions could be adopted by countries with detailed rules on authentication, as well as countries without such rules. The latter would have no difficulty in meeting the Convention requirements. The former would simply need to ensure that their rules were carefully drafted to avoid disrupting private contractual arrangements, discriminating against foreign users and providers of authentication services, or imposing other barriers on electronic transactions.

We have already succeeded in reaching agreement with Japan and France on joint statements that encompass the principles contained in the Convention. We are also engaged in discussions with the European Union, Canada, Australia and other important trading partners on these issues. We will continue to work closely with our State government partners, including the National Governors Association, as well as the National Association of State Information Resource Executives, the National Association of State Purchasing Officers, and the National Association of State Comptrollers. The last three organizations have just issued a joint resolution supporting the principles contained in the proposed Convention, and our efforts to negotiate it at an international level.

Standards

The prevalence of voluntary standards on the Internet, and the medium's consensus-based process of standards development and acceptance are stimulating its rapid growth. These standards flourish in a non-bureaucratic system of development led, in large part, by private sector technical practitioners working through various voluntary organizations.

The issue of standards is critical to the long-term commercial success of the Internet. Standards allow products and services from different vendors to work together. They also encourage competition and reduce uncertainty in the global marketplace. Premature standardization, however, can "lock in" outdated technology. Standards also can be employed as de facto non-tariff trade barriers, to "lock out" foreign businesses.

The United States believes that the marketplace, not govemments, should determine technical standards to enable the Internet to operate on a global basis. We also believe that the market is the best means to address challenges such as interoperability. Technology is moving rapidly, and government attempts to establish technical standards to govern the Internet risk could inhibit technological innovation. The Department of Commerce considers it unwise and unnecessary for governments to mandate standards for electronic commerce. Rather, we urge, and work closely with, industry-driven multilateral fora to consider technical standards in this area.

Nevertheless, only a handful of countries allow private sector standards development. The predominant position of governments around the world is to rely on government-mandated solutions, causing these nations to fall behind the technological cutting edge and creating non-tariff trade barriers. Our challenge is to fight for voluntary, industry-led standards as global electronic commerce evolves.

Numerous private sector bodies have contributed to the process of developing voluntary standards that promote interoperability. The United States has encouraged the development of voluntary standards through private standards organizations, consortia, testbeds and research and development activities.

Our commitment has been demonstrated on a number of fronts. First, as a result of legislation passed by this Congress with the support of the Administration, the United States is now the only government to my knowledge that is committed, by law, to the use of private sector, voluntary standards in our policy and regulatory actions. The National Technology Transfer and Advancement Act (P.L. 104-113), passed in 1995, evidences that the U.S. government has adopted a set of principles to promote acceptance of domestic and international voluntary standards.

Second, the Administration has actively advanced private sector leadership in the development of voluntary, consensus-based standards in bilateral and multilateral fora. As one example, the Department of Commerce worked closely with U.S. industry to successfully convert a proposed government-only Ministerial-level conference into a productive private-sector led and organized event that reaffirmed the principles of private-sector leadership in standards. Held in October, 1997, the Global Standards Conference featured U.S. industry in a leadership role in the area of electronic commerce. In that capacity, U.S. industry structured the agenda and coordinated input from their private sector counterparts in Canada, Europe and Japan. The Conference proceedings reflect consensus among participants, which included government representatives, that standards development is most appropriately undertaken by the private sector.

The Department of Commerce, with our long-standing experience in standards, continues to work directly with U.S. industry in preparations for a possible follow-up meeting to the Global Standards Conference, currently scheduled for September, 1998. The primary objective for U.S. participation is to reinforce the leadership role of the private sector in standards development.

Privacy

Much of the potential we see in the Internet and electronic commerce stems from the fact that information is widely disseminated on a global basis -- and that governments and the private sector transmit vast amounts of information about individuals easily and inexpensively. These same characteristics also heighten the risks to privacy. And, we are seeing that electronic commerce will not reach its full potential until consumers feel confident that their personal information will not be misused on the Internet. A recent poll of American Internet users revealed that 8 1% were concerned about their online privacy. The challenge in our view is to balance individual privacy values with the economic and democratic benefits that result from the free flow of information.

We believe this balance is best achieved through a self-regulatory approach led by the private sector, combined with targeted legislation to protect sensitive information such as medical records. Last year, when the President issued the ***Framework,*** he directed the Director of the Office of Management and Budget and me to work with the private sector to encourage the adoption of effective self-regulation and consumer empowerment technology to protect personal data on the Internet.

President Clinton's directive on privacy has been a high priority for the Department of Commerce, and I have been actively involved in this effort. I have personally delivered the message to industry leaders from around the country that our Administration is serious about online privacy protection.

In January of this year, Department of Commerce staff issued a discussion paper entitled *The Elements of Effective Self-Regulation for the Protection of Privacy,* which expresses our view that effective self-regulation must do more than just articulate broad policies or guidelines. Rather, effective self-regulation involves the adoption of substantive rules; the development of mechanisms to ensure that consumers know how companies intend to use their personal data and how to exercise choices about those uses; that companies comply with those choices; and that consumers have appropriate recourse when injuries result from noncompliance. The paper was designed to provoke a lively debate on the need for enforcement mechanisms that assure compliance with fair information practices.

Although industry response to the President's call for effective privacy self-regulation was slow in coming, over the past few months the private sector has taken some promising steps toward creating an effective system of self-regulation. An alliance of over 50 companies most active on the Internet and 15 business organizations representing thousands more companies has formed to promote enforceable policies to protect the privacy of consumers on the Internet.

More work needs to be done to make these protections a universal reality. The Department of Commerce will monitor the commitments of the companies in the alliance and the adoption of these privacy principles by more companies worldwide. I am, however, heartened by industry efforts in this important area, and I believe that we are developing a greater understanding of the circumstances under which self-regulation can work.

As we have worked to enhance privacy protection within the United States, the Department has also been working to head off potential problems with the European Union that stem from our different approaches to privacy. The EU has adopted comprehensive privacy

legislation that applies to all industry sectors and requires the creation of independent privacy commissions in each country and notification to those commissions before data can be processed. Most importantly from the U.S. perspective, the EU Privacy Directive would bar the transfers of personal information to other countries, like the United States, if they do not provide what the EU deems to be "adequate" privacy protection. The Directive goes into full effect in October, 1998 and could have enormous implications for commerce between the United States and the EU as millions of data transfers occur between us every day, if, for example, the EU or a member state were to determine that the privacy protections afforded to one or more data flows to the U.S. is inadequate under the Directive.

Since March of this year, David Aaron, Commerce Under Secretary for International Trade and John Mogg, the European Commission's Director General with responsibility for this area, have been engaged in an informal dialogue designed to avoid major problems when the Directive is fully implemented this Fall. The dialogue has been very productive and has focused on identifying areas of common ground and practical solutions to the problems raised by the Directive.

I would also like to note that we have received many questions concerning whether the Directive violates the General Agreement on Trade in Services (GATS). We think that question is premature at this time. We prefer an amicable solution with Europe, if possible, since in the long term we think it will be more productive. We are focusing our efforts on assuring robust privacy protection in the United States in a manner that best serves U.S. consumers and businesses. We are also working to assure that Europe is fully aware of the progress that U.S. industry is making in implementing privacy protections.

The Department has also actively advanced the Administration's privacy policies in bilateral discussions and multilateral meetings with foreign governments. We reached agreement with Japan on a joint statement that recognizes industry's role in developing self-regulatory privacy protection. And, the Department of Commerce has been able to broaden the international privacy debate at the OECD to include self-regulatory privacy regimes as valid approaches. A February 1998 OECD Workshop on Privacy successfully demonstrated the effectiveness of self-regulatory efforts in the United States and other countries. And, we will work to advance our privacy policies in APEC and the FTAA.

Content Restrictions

The Administration firmly believes that the further expansion of Internet-based services and economic activity could be severely hindered if subjected to content regulations traditionally imposed on radio and television. At the same time, parents must be able to determine what material is appropriate for their children and to protect them from undesirable content. We therefore support the rapid introduction of industry self-regulation, adoption of competing ratings systems, and the development of easy-to-use technology (e.g. filtering technologies, age verification systems, and others) to assist in screening information online. Domestically, the Administration was encouraged by the "tool kit" provided by industry at its summit in December, and welcomes the various industry/law enforcement cooperation initiatives. The Department has actively advanced the Administration's policy regarding Internet content, in multilateral fora, bilateral discussions, and multilateral meetings with foreign governments. Although some other governments have taken or are considering more regulatory approaches to Internet content, the

Department has been encouraged by a developing consensus in support of industry self-regulation. Several recent European court cases seem to have raised awareness of the problems and inequities that flow from a more proscriptive approach.

At the OECD in particular, the Department of Commerce has succeeded in re-directing proposals for international guidelines intended to regulate Internet content toward an inventory of policies, laws, and practices among OECD member countries affecting Internet content. In addition to providing a richer factual basis for international discussions on Internet content, the inventory has facilitated very productive discussions of the different approaches toward content self-regulation that member countries are adopting. Working closely with U.S. industry, the Department helped organize an OECD Forum on Content Self-Regulation in March, 1998. The Forum was extremely successful in demonstrating the range and scope of diverse self-regulatory initiatives being undertaken by industry among OECD countries, and featured a number of U.S. companies as speakers. Largely as a.result of the Forum, consensus has been reached among OECD member countries on the practical merits and value of self-regulation in the area of Internet content.

The Department has also been actively developing and leading electronic commerce-related efforts in APEC, helping to organize a conference last September which examined the link between content and infrastructure, identified the needs of content and Internet-based sectors, and informed APEC economies of those needs.

Intellectual Property

The growth of the Internet has created a vast array of opportunities for marketing

products, including many products that embody copyrighted works or that bear trademarks. At the same time, however, it has presented a number of very serious challenges to policymakers and administrators. Copyrighted works can be disseminated over the Internet without the authorization of the copyright owner with unprecedented ease and quality. As the Internet knows no geographical boundaries, copyrighted works can be disseminated from any country in the world to any other country in the world. There are no barriers to dissemination but there could be barriers to enforcement of copyrights. Given technological advances, we anticipate that inadequate intellectual property protections or lax enforcement in one country could provide a haven for pirates who could undermine the market for legitimate "goods" throughout the world.

To forestall the creation of such havens, the member states of the World Intellectual Property Organization (WIPO) negotiated the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty. As you know, the President submitted these Treaties to the United States Senate on July 28, 1997, for its advice and consent on ratification. The Senate passed the implementing legislation by a vote of 99-O in early May. Implementing legislation is now awaiting consideration by the House of Representatives. We appreciate the prompt consideration of the legislation by this Committee. I hope it will move to the floor quickly so that we will see enactment of the implementing legislation during the Second Session of the 105th Congress.

Export Promotion and the Internet

Before I conclude, I want to spend a few minutes discussing how the Department of Commerce is taking advantage of electronic commerce to improve delivery of our services to the

American public. As part of Vice-President Gore's leadership on reinventing government, all Federal agencies are providing extensive, and increasing, electronic or online availability of government forms and applications. Additionally, the Executive Branch is making extensive use of the World Wide Web to interact with the public about agency programs, regulations and policies, employment opportunities, and other government activities, as well as ensuring the electronic availability of requests for proposals for the provision of goods and services. Here at Commerce, I have committed to make the Department a model of electronic commerce. An "electronic Department of Commerce" will realize tremendous cost and time savings and allow us to provide new and innovative services.

Let me provide you with some examples of our efforts here at Commerce:

- Our Bureau of Export Administration last week announced plans to receive export license applications and other submissions over the Internet.
- Our Patent and Trademark Office is rapidly expanding its searchable patent and trademark databases, which by the end of the year will have detailed information on all registered trademark and pending trademark applications and all patents issued from 1976 to the present.
- At the National Institute of Standards and Technology (NIST), Internet users can download the latest Standard Reference Data, receive electronic versions of its "Journal of Research" and synchronize their PC clocks to the MST's atomic clock, the Nation's timepiece.
- Through the National Technical Information Service web site, users can identify 370,000 technical publications, data files, CD-ROMS, and audiovisual materials that have been produced in the last 10 years and, beginning next month, will be able to order and pay for these products via the Internet.
- Several rulemaking procedures and requests for public comment have been conducted on the Internet. For example, in connection with the Department's work on privatization of the Internet address management, the National Telecommunications and Information Administration (NTIA)

solicited public comments online. Comments were posted on the Internet as received and readily available to the public for review. No interested party was required to come to Washington to see the comments submitted. As a result, we received valuable public comment from many Internet stakeholders around the world.

- The Minority Business Development Agency's (MBDA's) new Phoenix and Opportunity databases electronically match minority businesses, through their identified capabilities, with corresponding contract and other opportunities. These systems, which were made operational in 1998, will contain over 35,000 firms in 1999 and more than 100,000 firms in 2000, and will use advanced technology to automatically deliver through the Internet pre-selected market opportunities from public and private sources directly to the e-mail systems of qualified minority businesses. The Agency anticipates using these databases both for international transactions and larger scale transactions supported by joint ventures, partnerships, and other strategic alliances.

- STAT-USA in the Economic and Statistics Administration (ESA) operates one of the premier trade, business, and economic data sites on the Internet. Over 400,000 files from 40 federal agencies are maintained and updated throughout the day. Many products, including the National Trade Data Bank, play key roles in helping U. S. businesses. compete effectively in foreign markets.

- ESA's Bureau of the Census web site receives an average of 500,000 hits per day, providing users a vast array of detailed economic, demographic, population, and trade information. Trade information ranges from up-to-date import and export data to information about how exporters can file their export declarations electronically through the Automated Export System. The Census Internet site has received numerous awards for its detail, accessibility, and the ease by which users can locate and use the data that is provided.

These are just a few examples from among all the Commerce agencies. Today, I would like to elaborate on our efforts in the International Trade Administration to use electronic commerce tools to achieve our mission goals, including providing business counseling, market information and promoting exports through trade events. If used to its maximum potential, the Internet will allow companies, no matter how small, to reach customers worldwide, directly. The

potential for increasing small business participation in exporting is tremendous, and the Internet can play a useful role in addressing some of the obstacles they face, such as access to information and financing. I have asked our International Trade Administration to target these efforts to small and medium-sized companies, as well as those companies located in remote areas.

To broaden our reach, ITA now provides trade promotion information through its web sites. In the first six months of 1998, our web sites have been visited by nearly 1 million people per week. These sites have made real strides in easing the difficulties faced by U. S. exporters in accessing market information -- a significant barrier to market access. ITA's Trade Information Center maintains and regularly updates its trade database of country- and industry-specific information, and makes this information available on the Web. For business counseling and advocacy, companies can visit the Trade Compliance Center's web site. The site contains a fully searchable database of more than 250 trade and related agreements, market access information for over 100 countries, and links to key U.S. Government and international trade organizations.

We are training both our trade specialists and our clients to take advantage of the opportunities afforded by the Internet. Our Export Assistance Centers are conducting *Electronic Commerce Seminars* designed to educate the exporting community on the Internet-based marketing and technology tools available today to assist companies in exporting their products worldwide. The seminars will be held in Oakland, Ann Arbor and Philadelphia in September; Frederick, Newark, Hartford, and Miami in October; and Charlotte in November. The sessions will be broken into three parts: 1) How to market your product on the Internet; 2) How to engage in financial transactions over the Internet; and 3) Taxes and the Internet. My commercial

development mission to Africa this September will also focus on ways that electronic commerce can play a role in business development through training and outreach.

We are also modifying a number of our current products to take advantage of this technology. Small firms interested in increasing export sales will soon receive trade leads or international procurement opportunities through *Tradenet/Export Advisor, an* interactive, international trade "tool kit" on the Internet. *Tradenet* is a multi-agency, intergovernmental, multi-functional export assistance online service.

ITA's Commercial Service is working to make most of our trade promotion services available for electronic purchase through the Internet. Our Customized Market Analysis, Agent Distributor Service, and International Company Profiles will be online within the next year. Commercial Service Web sites are being enhanced to provide more comprehensive services to U.S. companies, including online registration and payment for trade events.

Even the Gold Key Service, which provides specialized business facilitation services (interpreters, meetings with buyers, communications services) to U.S. businesses overseas, will be tailored to take advantage of new technologies. The *Video Goldkey will* facilitate export transactions by using videoconfierencing equipment to link U. S. exporters with international buyers. Under this service, international buyers will be able to view the product, as well as marketing materials, shipping papers and other relevant information, and Commercial Service Trade Specialists will be available to answer any questions. The Video Goldkey is not intended to replace face-to-face interaction in the international market, but rather to help foster the business relationship before and after an actual trip.

We are also developing a *Virtual Trade Show* where products for sale will be electronically listed. Virtual Trade Shows will assist U. S. companies in export promotion by bringing product information to potential buyers through electronic means. Companies will have the ability to place photos, descriptions and pricing information for their product in an electronic format. For example, the U.S. Technology Industries Virtual Pavilion on CyberExpo in China is an ongoing 24-hour a day Chinese language virtual trade show available on the Chinanet, China's main Internet network. The Pavilion went online in August 1997, and focuses on promoting U.S. small- and medium-size enterprises in the Chinese business community. The Pavilion provides a showcase for U.S. businesses through services such as online product catalogues. The virtual Pavilion is a U. S. government "first," and attracts over 10,000 Chinese visitors each day.

ITA is also developing a series of initiatives that utilize technology to reach out to exporters regardless of their location within the United States. The Rural Export Initiatives uses interactive, video-conferences and push technology by delivering timely marketing information directly to companies, wherever they may be located. Our pilot push technology project will profile the trade information needs of 100 rural pilot companies and, using unique software applications, will ensure that this information flows to them as it becomes available from our overseas posts and Commerce's trade databases. Through our trade specialists in the field, we are currently identifying and working with rural companies who will serve in this pilot project. An interactive web site featuring market research, trade leads, and a trade events calendar is planned. Future activities include three interactive videoconferences on a national level. The first of these

events was the Mercosur "Contracts through Contacts" videoconference in May 1998 in Pittsburgh, which was downlinked to 47 rural communities across the United States.

While this new technology is helping us to bridge the information gap and expand the capabilities of our promotional programs, we are also developing new programs to address the export financing gap. Under the auspices of the TPCC, we are working with SBA to develop an Internet-based program to match exporters with export finance providers. This matchmaking program will allow instant exchanges of information and access to export financing for small businesses.

Conclusion

President Clinton's policy, outlined in the *Framework*, is an important first step in dealing with the many policy and market-related challenges of electronic commerce. As we move toward further implementation of the President's recommendations, the Commerce Department will continue to play a leadership role in helping American businesses succeed in the digital marketplace. An open market system, technical innovation and advanced regulatory and legal structures give the United States a competitive edge in electronic commerce. But many policy challenges must be met to realize the promise that electronic commerce holds for all Americans and the world. I commend this Committee for holding today's hearing on this important topic and look forward to working with the members of this Committee and the rest of the Congress to ensure that electronic commerce will thrive.